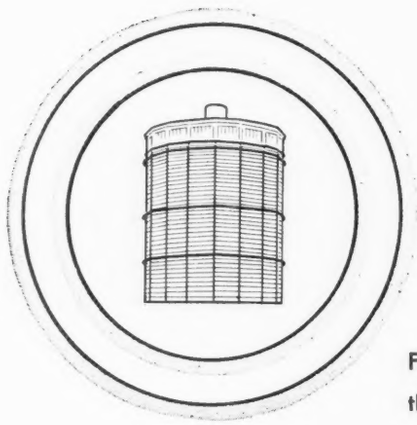
PRINTING EQUIPMENT ENGINEER

Edited for those concerned with the use and care of Printing Equipment

JANUARY 1932

Gas

FOR HEAT WHEREVER HEAT IS NEEDED



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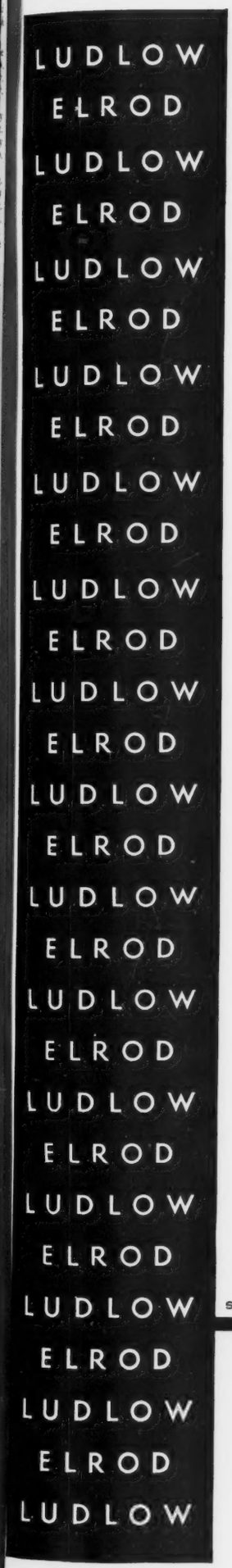

Is obsolete equipment keeping your costs high?

■ In no department has the factor of equipment so marked an influence on costs of production as in the composing room.

■ If you are finding it difficult to make a profit on job and display composition, the LUDLOW will enable you to produce more economically. It materially reduces the time of composition, make-up and lock-up, eliminates all expense occasioned by inadequacy of type supply, permits duplication of forms at negligible cost to cut down press runs, and permits you to hold any job standing for profitable re-orders.

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■ Take stock of how your composing room stands. Let us furnish you with full information regarding the advantages offered by the Ludlow and the Elrod. No obligation, of course.

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Gentlemen: You may send me—without obligation—information regarding the Ludlow and Elrod, and how they will contribute toward reducing composing room costs.

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Firm_____ Type of Work_____

January, 1932

• *1931*

has been a year of
satisfactory progress for

THE L. MARTIN COMPANY

because over 225
new customers have
joined the many
satisfied users of

COLUMBIAN INKS

Enterprising Publishers and Pressmen
will join the forward
march in 1932 . . .

The L. MARTIN COMPANY
45 EAST 42nd STREET . NEW YORK CITY
Arthur S. Thompson. *Manager*

PRINTING EQUIPMENT ENGINEER

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Let others also read *The Engineer*

After you have read this copy, pass this magazine along to the other men in your organization. They will undoubtedly get helpful ideas from its pages.

Check in left column after reading. Note articles of interest.

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☐ *Superintendent Press Room*

☐ *Chief Composing Room Machinist*

☐ *Superintendent Stereotype Foundry*

☐ *Monotype Department*

☐ *Photo Engraving Department*

☐ *Superintendent Electrotype Department*

☐ *Foreman Lithographing Department*

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☐ *Manager*

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Contrast *Matrix*

"Contrast Provides VISIBILITY"

Paraphrasing an Old One!

"Look before you leap" is an antique among wise words. But "Look before you cast" is the slogan of the modern typesetting machine operator.

The Black & White Contrast Matrix makes typesetting *visible* . . . permits the operator to see what he sets . . . enables him to avoid needless errors . . . minimizes eyestrain.

Swing along with the Moderns. Ask for Black & White and — "Look before you cast."

The Black & White Contrast Matrix is not an expense — it is an economy. If anyone contradicts that statement, ask us to prove it.

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33 West 42nd Street, New York

PRINTING
EQUIPMENT
ENGINEER
January, 1932

The Development of Offset

By J. W. VALIANT*

THIS year marks the twenty-fifth anniversary of the first commercially successful offset press which was a 22x30-in. press installed in the plant of the Republic Bank Note Co., Pittsburgh, Pa. Ira W. Rubel, who was operating a small lithographic plant in Nutley, N. J., and A. F. and Charlie Harris of Niles, Ohio, building rotary printing presses conceived the idea of offset printing, by accident at about the same time.

It seems that one day, A. F. Harris, Chairman of the Board of the Harris-Seybold-Potter Co., heard a lithographic pressman angrily address the universe in general and his feed girl in particular when she failed to trip the press as she missed feeding a sheet; the result, of course, was an impression on the blanket.

Mr. Harris amazed at his language, inquired what had happened. The pressman showed him a sheet which was not only printed on the face but the back was printed or "offset" in reverse as well. Mr. Harris noted that this reverse or "offset" printing was much more delicately done than the direct impression and the lines were sharper and clearer. "I wish we could print like that," the pressman told Mr. Harris. The result was that A. F. Harris and his brother, Charlie, experimented with the offset process which they later developed and perfected.

The first offset press built by the Harris Brothers was a four-cylinder press which used electrotypes and had two rubber blankets. This necessarily proved a failure on account of the fact that by transferring from one rubber to another there was a great deal of detail lost and incidentally, a lot of static electricity resulted.

Just before the Harris Brothers built their first commercially successful offset press, Mr. Rubel built an offset press which was called the "Rubel" and later the "Sherbel"—a combination of two names, Sherwood and Rubel—made its appearance. The Potter offset press was a later development of this press.

The original Rubel press was intended to be sold to only twelve lithographers in various parts of the country but owing to the fact that the Harris machine was developed at practically the same time as the Rubel and, further, due to the fact that the offset process had been used about 35 to 40 years in connection with lithographing on tin, its use could not be limited; thus, the field was open to both Mr. Rubel and the Harris brothers for further development.

The earlier history of the offset process was beset by difficulties and antagonisms like everything else new and revolutionary. It was only after unusual efforts requiring changes in the press, ink, plate-making, blankets, and almost everything connected with the business, that the offset process began to be accepted generally.

In the early days of offset many exaggerated and perhaps untruthful statements were made—some false and others to be realized only after long and arduous effort. Some of the earlier selling was antagonistic to the older and longer established typographic processes, yet, continually, work obtained from offset improved and offset lithography passed from the place of the experimental stage to recognition and acceptance. The earlier work which served them as a basis for so many extravagant claims, now seems crude, indeed.

There are always extremists and, naturally, these urged their own pet theories to most absurd conclusions. It is but recently that it has begun to be generally recognized that there are three different methods of putting ink on paper and that each has its distinct advantage, and there is room for all.

In addressing you as a representative of the Harris-Seybold-Potter Company, which makes equipment for all three methods—typographic, offset, and gravure—I have the distinct advantage of being able to speak frankly. We recognize that certain jobs are better produced by the offset method, some by the typographic method, some by gravure, and some by a combination of one or two, or even three of these processes.

In thinking of offset, we should think not only of its faithful reproduction of color but the beauty of black and white which in the continued emphasis of color, has almost been overlooked.

There are about 800 plants employing lithographic equipment in the United States, using in the neighborhood of 2,500 or 2,600 offset presses. About ten years ago, it was very rare to find a printing plant operating offset presses or vice versa but at the present time I would estimate that between 40 and 50% of the plants using offset equipment are using at least one of the other processes of putting ink on paper. It is our sincere belief that it will not be very long before all printers of any importance will realize that it is to their distinct advantage to be able to offer to their clientele, both offset and letterpress and possibly gravure.

There are some outstanding examples and you do not have to go outside of your own community to find them. We might refer to the Forbes Lithographic Company, Tudor Press, Tolman-University Press, R. R. Donnelly, Walton & Spencer, Magill-Weinsheimer, Jersey City Printing Company, U. S. Printing and Litho Company, and innumerable other nationally-known concerns.

It is not policy to talk too much about cost, as costs depend a great deal upon equipment, personnel, and location. I might say, however, that only a few days ago I was talking to a man who is operating both letterpress, flatbed, web, as well as sheet-feed rotaries, and also offset, and he told me

*Eastern District Sales Manager, Harris-Seybold-Potter Company, Cleveland, Ohio. Abstract of address delivered before the Boston Club of Printing House Craftsmen, November 23, 1931.

that certain work which previously had been done typographically recently had been changed to offset at a saving of about 30% in the production of this work. There is other work, of course, which would cost considerably more by offset than by one of the other methods.

On the silver anniversary of the building of the first commercially successful offset press, all of us connected with the Harris Company believe that the greatest single achievement during the twenty-five years in which the offset press has been forging ahead from crude beginnings to the perfection of its present development, is the realization that the offset process is worthy of consideration by every one of us. All realize that offset, great as has been its development, has scarcely yet scratched the surface of its potential development.

Courage and Clear Thinking

(An Editorial)

Printing Equipment Engineer has received a Bulletin entitled, "Thinking Through," by James S. Gilbert. We quote from the introduction which is as follows:

> After sunset comes twilight. Then darkness. Then dawn. Then sunrise.
>
> Business has such cycles described respectively as prosperity and recession, depression and revival.
>
> We can imagine the terror of some primitive man, who, basking in the sun all day, saw it set at night . . . it was gone, lost, and it would never come back!
>
> Each business recession brings out a flock of such primates. To them the sun of prosperity has forever set. They fail to grasp that they are witnessing a rhythm or periodicity of business phenomena. While others set about the business of preparing for a new day they wail and wring their hands.
>
> Twilight catches them unprepared for night. Daybreak finds them unprepared for day.
>
> How foolish! History records eight major business cycles between 1885 and 1927. Look at the facts! There are as many booms as there are crises, and as many recoveries as recessions. When everything is being "sold" on the stock market one should realize that everything sold is being *bought*—bought by those canny people who realize and act on the knowledge that night precedes dawn and that depression is the dawn of revival.
>
> After every "panic" what characteristically happens? Stocks, bonds, securities, etc., have passed from "weak" into "strong" hands. Coolness has won and those who thought in the moment have paid their periodic tribute to those who think through.

Out of the depression *must* come a business revival. The writer of "Thinking Through" offers a deliberately controlled mental attitude as a means of helping everybody to help himself out of the depression. From this standpoint alone we would suggest that the Bulletin is well worth while reading. The constructive nature of the author's remedial suggestions should be of real help to anybody.

From the aggregate mass of testimony as to "prosperity spots" two reactions come to the writer under the heading: "When It's Dark Sell Illumination": (1) That business can be secured in the *night* of depression by those who think "How?" (They may finally decide on a demand for illumination, bedding and pajamas) and (2) That we are today in the daybreak of revival.

The writer does not merely say that the depression is lifting but offers a method for taking advantage of conditions to dissipate it. As a result, your business might need some inspection with a magnifying glass in order to turn wastes into savings. This aspect of the situation may mean the assumption of that courage which you do not now possess. A chain store organization sought means of cutting costs but did not cut advertising. With many other firms *they found new ways of using advertising* and never became guilty of the fallacy of cutting down the effectiveness of a sales tool.

Hard thinking along the lines suggested will give more than one executive a new outlook. The preachment is to *plan now* for the rising sun and the coming day so that, like the early bird who caught the worm, you may lay your foundation *today*.

Self-Confidence

By William Feather

The mark of every first-rate man is sufficient courage to overcome the shyness that blocks self-expression. Most of us are so self-conscious that when we step out of our own little corner we become as timid as mice.

What we must learn, according to the psychologists, is that everyone else is a victim of the same timidity that thwarts us. A few have had the courage to step out, and many have won acclaim.

If we hope to amount to anything we, too, must shake off our fear and break away from the herd. We must begin to function as individuals. Having done that, we may find ourselves equal in capacity to the men in whose presence we have always trembled.

Thanks, Mr. Meisenheimer

Milwaukee, Wis., Nov. 14, 1931.

Printing Equipment Engineer,
Cleveland, Ohio.
Gentlemen:

I want you to know that your journal is the only technical publication relating to the printing industry that I receive.

Its timely and accurate information regarding equipment and methods is valuable in supervising the varied production of our plant.

Yours very truly,
Adam A. Meisenheimer,
Vice President and Superintendent,
Meisenheimer Printing Co.

Why Color Printing in Newspapers?

By MILTON E. HANSON*

SUGGESTIONS for changing present methods in industry fall on deaf ears unless sound economic reasons for changes can be given, pointing out beyond all doubt that a definite profit is to be derived. We may point out increased beauty, usefulness, adaptability, and other worthwhile qualifications but without clearly *demonstrating the profit* our efforts are wasted. Somehow it seems that pecuniary expediency must prevail over principle all too often these days.

The engineer's job then becomes one to design all factors to come out right in the interests of all parties concerned—the manufacturer, the employees, the sales force, the buying public. This is the probable thought back of President Hoover's idea for an Economic Planning Commission.

First, let us start with the basic and well-proven premise that right ideas bring about right action, right action brings the right results and the converse brings wrong results.

Unfortunately the test of our ideas comes only when we observe the results. If the results are wrong there is a falsity somewhere in our ideas.

The present depression is being brought about almost entirely by the poor results of the business ideas we have entertained and put into action since the War. What the errors were is another subject. This much we know, that millions of men have been thrown out of work. They have got to make a new start—all of them. Big business may have gotten too big but we are sure that many new industries will have to be started to employ these men. They will start the industries themselves to make a living for themselves in a small way. One thing we have learned is that business depends upon the earning power of the masses. It must be made easy for them to get started in all ways possible.

How does this concern the newspapers? What contribution can they make resulting in a profit to themselves? We will all concede that advertising has become a necessity to the carrying on of any business. The income from advertising practically supports any publication. The advertising medium of a type to meet the majority of needs will prosper.

If we examine newspapers and magazines published twenty to thirty years ago (a *Saturday Evening Post*, for example) compared to a newspaper of the same times, we find all of the illustrations of articles for sale very much alike, done in sketchy black lines with essential details obscurely represented, leaving the reader's imagination to fill in a completed picture. This was then considered good enough only because nothing better was to be had.

It was left to the magazines to pioneer good illustrations in advertising. We have the visible results as to usefulness and profit to manufacturer and publisher alike.

Unfortunately in some respects magazine circulation is nation-wide. Newspapers have lived without an economic necessity for improvement all these years because of a continued demand for local advertising. Their illustrations still appear almost indistinguishable as to detail by comparison to a four-color magazine. Just how inadequately they meet the local need would very likely be clearly demonstrated should one of them suddenly blossom forth with back-page advertising in color and in fitting detail.

There is an unfilled want for a surer means for local advertising. The newspapers can fill it. Newspapers will always be read. People will always look for bargains or to see what is on sale at the local stores or those in the nearest large city. In the back pages of the newspapers comparisons should be presented, because people look there for things on display, much as in a store. What a poor showing they make as articles are represented there now! Descriptions are largely in words and words are growing inadequate. An examination of a current Sunday paper advertising section yielded many cases such as the following: Three jewelry stores advertised their prices the lowest in the city; two other stores sold the best tires in the world; three candy stores sold the best candy; several real estate companies had all the best apartments for rent; two department stores carried the best linoleums, the most beautiful dresses, the best iceless refrigerator, and the best of many other things; three other stores stated definitely they had the biggest values in town. What is one to believe? To be sure illustrations may be distorted (illustrating a Ford, long and low like a Packard) but direct comparisons with the real thing can be made quickly and the lie readily discovered. Accurate representation of goods on sale in picture form is just what is wanted.

Why are so many magazines doing well—even duplicates in the same field? One reason is that even the advertising is educational. Things made by industries large enough to do a nation-wide business are well illustrated there and comparisons can be made. Magazine advertising has been on the increase for years, keeping pace with the development in the printing art. It has paid the advertisers so well that it has become the goal of every concern to build up distribution facilities to meet the return this sort of advertising brings. It has set a premium on national-sized sales organizations.

Now what is the very probably result if newspapers were to print the same type of advertising as the magazines? Small concerns could advertise to much greater advantage in competition with the large concerns. A larger variety of things could be displayed to better advantage. Thus advertising would increase. Space would become more valuable, for the return on the investment in it would be greater, resulting in increased revenue to the newspapers as well. It would solve the advertising problem for new small concerns by really making it so much easier for them to get started. It is conceivable that the department stores could do a real mail order business within a local area. Even concerns doing a nation-wide business would use this medium to try out certain products in picked localities. Merchandising has come to stay awhile, for such lines have paid right along through this depression when lines of special nature or design have failed. The merchandising departments have saved many of our large manufacturers this year. These lines will now be pushed for they have proven out, they will be added to, they fit into the scheme very nicely.

Certain it is that a new order of things would be created. It is easy to imagine that it might become a very large factor making for the return to normal business activity.

Newspaper executives will ask: How are we going to print color every day and continue selling papers for two cents? With only national advertisers to draw upon several five-cent weekly publications prosper. If newspaper publishers will set their engineers to work on the process one will be developed, for nothing is impossible.

Let them answer the question: Why not?

*Mechanical and Chemical Engineer, Collingswood, N. J.

Modern Home for Newspaper

By CHARLES KISTENMACHER*

THE St. Louis *Globe-Democrat* now occupies a new home which is being heralded throughout the nation by newspaper experts as one of the most efficient newspaper plants. With plans adapted from the experiences of some of the most successful newspapers in the country, and with many innovations especially applied to its own needs, this elaborate new plant has already started to revolutionize newspaper production for this famous old newspaper which has been in the publishing business since 1852.

Especially interesting are the mechanical details involved in the production methods of this plant.

ADVANTAGEOUS LOCATION

Even when the site for this building was selected, mechanical efficiency was taken into consideration. A site was chosen on the block at 1133 Franklin Avenue. This location is close to the business district, and its proximity to the St. Louis Union Station facilitates the shipping of mail editions of the paper. Another asset of this site is the location of the Illinois Traction System's subway which parallels the building on the west. This subway is on a level with the sub-basement of the new building, 32 feet below ground level, and makes possible the receiving of paper and supplies, directly, without rehandling.

SUB-BASEMENT EQUIPMENT

The sub-basement occupies almost an entire city block. Here are located the machine room, two ink tanks of 5220-gal. capacity each, and the main paper storage room.

*The *Globe-Democrat*, St. Louis, Mo.

E. Lansing Ray, president and publisher, officially pushes the switch button which sets the presses in motion in the "Globe-Democrat's" new home. Frank DeWarf is mechanical superintendent.

The machine room houses the main switchboard of the building, the transformer room and three motor generator sets—two of which are of 300 kw. capacity and one of 150 kw. capacity, 250 volts. An interesting feature of the electrical installation are the feeders over which the electrical energy is brought in from the local power company. In order to assure continuity of service, two feeders, each with separate sources of supply, have been installed. In the event that one feeder fails, the other wire, by means of an automatic switchover, immediately "cuts in."

AIR-CONDITIONING MACHINE DELIVERS 70 DEG. F. AND 58 PER CENT R. H.

In the same room with the electrical equipment is the air-conditioning system which supplies 80,000 cu. ft. of properly conditioned air to the press room and paper storage room. In order that the paper being used will be in best condition, the air machine has been adjusted to deliver a 70 deg. F. temperature and 58% relative humidity.

The balance of the sub-basement is used for paper storage. When the paper rolls are stacked four deep, the room holds 7000 tons of newsprint—a supply which will handle the printing requirements of average-size *Globe-Democrats* for several months. Paper arrives just outside

The battery of presses in the new home of the St. Louis "Globe-Democrat." Here the public may view operations through plate glass windows. Clay H. Schmidt is foreman of the press room.

the sub-basement by freight cars on the tracks of the Illinois Traction System's subway. Special trucks carry the rolls from the cars into the inner receiving platform, where they are tipped off the truck into rolling position. The newsprint is then rolled onto a conveyor which runs the length of the receiving platform and can be reversed by push-button control. Parallel to this conveyor is the tiering machine track. The rolls are pushed from the conveyor onto the tiering machine and lowered or raised to the proper height to be rolled off onto the floor or on top of the layer of rolls already in place.

New home of the St. Louis "Globe-Democrat." The building is fireproof, constructed of steel and concrete, and is faced with soft, gray brick. It is six stories high and has a basement and sub-basement.

To take the paper out of storage and bring it to the reel room above, a tiering machine is brought into play on the opposite side of the building. By means of two Jampol flight conveyors, one at either end of the paper storage room, the paper is carried up a 30-deg. slope to the reel room above. The sub-structures of the presses, and new type Kohler reels are located here. The Kohler reels are so constructed as to permit changing of rolls of paper without bringing the presses to a stop.

PRESS ROOM CONSTRUCTED FOR FUTURE GROWTH

The press room of the plant is located on the main floor. Large windows on the west side give spectators an opportunity to view the presses in action—a sight which has attracted many people.

There are two rows of Duplex Black-and-White presses. One line contains 16 units and 4 folders, comparable in size to four of the decker type octuple presses. The second row consists of 5 units and one folder, thus giving a total of 21 units and five folders, with foundations already laid for completion of the line to 16 additional units whenever expansion is necessary. These presses are capable of printing 175,000 forty-page papers an hour.

THE COLOR PRESS

A Goss color press on the east side of the press room is capable of printing 24,000 eight-page papers, in four colors, per hour. The presses are insulated from the rest of the building by a "floating foundation" and cork insulators. An unusual feature of the press room is the two-ton electric tram rail which runs over the two lines of presses. This tram rail, with its crane, was used to excellent advantage at the time the presses were installed and is kept in condition to handle repair parts of the presses, when it becomes necessary.

General view of composing room, St. Louis "Globe-Democrat." The modern lighting system provides ample illumination. An efficient layout of the equipment speeds work through this department. Edwin Evers is superintendent of the composing room. Joseph Bovery is machinist-in-charge of the 40 Intertype machines.

THE MAIL ROOM

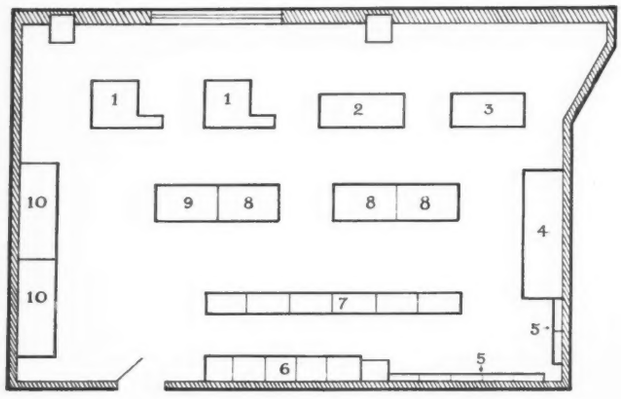
The mail room is on the third floor, directly above the press room. Here the printed papers arrive immediately after coming off the presses below. They are brought up

through the floor by means of Cutler-Hammer conveyors, and are delivered at a point close to the mailing tables. A "fly boy" here takes them and places them on tables where mailers tie them in bundles. The bundles are dropped through openings in the floor onto belt conveyors which run to the outside loading platform. Here the bundles are placed into trucks which rush the papers to their various points of distribution.

Directly over the mail room, on the fourth floor are the other mechanical departments. These include the composing room, the stereotyping department, the photo-engraving room and the photographic department.

THE ENGRAVING DEPARTMENT

Both the photographic and the photo-engraving departments are furnished with the most up-to-date equipment. Individual dark rooms with ventilating systems and running ice water are installed in the photographic department. The engraving room has all new and modern Chemco equipment including a Chemco stripfilm camera which is built into a dark room. A definite straight-line method of production is used in making zinc cuts and half-tones.



KEY TO LAYOUT SHEET, ST. LOUIS *GLOBE-DEMOCRAT* MONOTYPE ROOM

The Monotype caster room is located just off the composing room from the doorway in the upper right-hand portion of the layout shown on the opposite page.

1—Monotype Sorts Casters.
2—Monotype Material Maker.
3—Monotype Giant Caster.
4—Machinist's Bench.
5—Sorts Cabinets.
6—Mold and Matrix Cabinets.
7—Sorts Cabinets.
8—Strip Material Cabinets.
9—Space-and-Quad Cabinet.
10—Stands for Reserve Type Cases.

COMPOSING ROOM FEATURES

An interesting feature of the modern composing room is its maple floor. Here are located 40 Intertype machines with provision for 32 line-casting machines. As a matter of convenience, metal-cutting saws and mitering machines have been placed in alleys where the Intertype machines are located. Surrounding these saws are specially designed American Type Founders guards containing shelves which hold 30 designs of ornamental borders.

Immediately adjoining are type cabinets, various auxiliary machines, and 18 composing "stones" (solid steel top tables, 12 ft. long) under which are racks containing column rules, leads, dashes and other much-used type matter and all within easy reach of the make-up men. In the ad-composing room there are 57 assembling cabinets containing an assortment of working materials. These cabinets weigh more than 6 tons each, when filled.

THE MONOTYPE ROOM

The monotype room, partitioned off from the composing room, is advantageously located in close proximity to the type cabinets. The room is equipped with three Monotype Type-and-Rule casters, one material-making machine and a Giant type caster which casts up to 72 points.

THE STEREOTYPE DEPARTMENT

The stereotyping department is separated from the composing room by a hanging partition which comes within 7 ft. of the floor. This apron confines the fumes arising from molten metal within the stereotype room proper. A special ventilating system picks up the fumes and carries them out of the building before they can spread to the composing room. The equipment in this room includes two double-action mat rollers, two

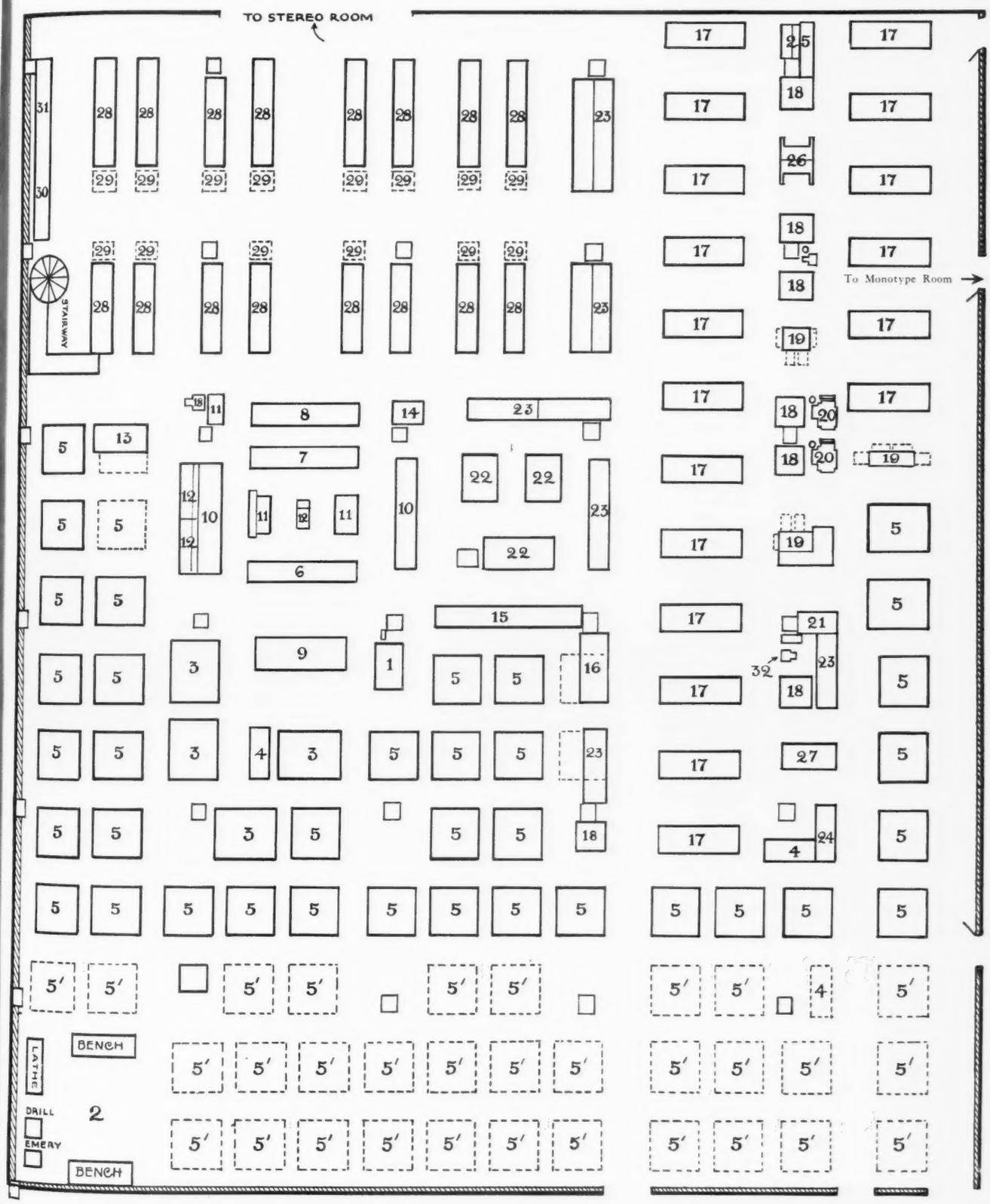
View of the stereotype department, showing the dual action mat roller at the right. The mat former is in the center and the mat scorchers are at the left in front of the 20,000-pound electrically-heated metal pot. P. E. Silver is foreman of the stereotype department.

KEY TO LAYOUT SHEET, ST. LOUIS *GLOBE-DEMOCRAT* COMPOSING ROOM →

1—Foreman.
2—Composing Room Machinist.
3—Head-letter Machines.
4—Magazine Racks.
5—Line-casting Machines, 5-foot Space Reserved for Future Line-Casting Machines.
6—Dumping Table.
7—Correcting Table.
8—News Table.
9—Copy Desk and Chute.
10—Storage Table; space *12*, at left of dumping table *6*, are Cabinets for Hand-Set Heads.
11—Proof Presses Backed up by Copy Tables.
12—Chute and Dumbwaiter, between Proof Presses, *11*.
13—Revise Desk.
14—Makeup Editor.
15—Storage Table for Proof Paper and Supplies.
16—Ad Foreman's Desk.
17—Ad Cabinets with Work Tops.
18—Saw and Guard.
19—Ludlow Matrix Cabinets.
20—Ludlow Machines.
21—Rouse Band Saw.
22—Ad Proof Presses.
23—Ad Storage Tables.
24—Ad Dump and Storage.
25—Space-and-Quad Cabinet, Giant Caster Material.
26—Large-letter Cabinets.
27—Ad Assembling Cabinet.
28—Makeup Tables.
29—Trucks.
30—Classified Ad Tables.
31—Classified Ad Tables.

Stahi mat formers, two Speed mat "roasters," three Wood Automatic Autoplate machines and three shavers. When plates reach the final stage of production and are finished by the shavers, they go directly onto a plate conveyor system which leads down through the floor directly to the presses. Besides special equipment used in making color plates, the department has two Wood electrically-heated metal pots of 20,000-pound capacity each.

Up-to-date steel desks in the Advertising and Editorial departments, large metal windows, an elaborate telephone system, well-lighted offices—all go to make this new home of the St. Louis *Globe-Democrat* one of the most modern and efficient newspaper plants.



Causes for Non-Response of Matrix

By CHESTER S. KELLEY*

TO ALL intents and purposes a line-casting machine is a simple mechanism—*when it is functioning properly*. When a condition like this exists the operator produces composition the foreman is pleased with the production and the machinist is happy because his maintenance work is showing results. The machine as originally constructed by the manufacturer is so designed that it will work properly. However, the state of wear of the various keyboard parts, temperature of the room, maintenance care given the machine by the machinist and the sanitary conditions existing in the composing room all have a bearing upon the proper response of matrices when the operator manipulates the keybuttons.

When a matrix fails to respond the machinist usually dresses burrs from the matrix lugs or gives some attention to the keyboard cam. Sometimes these operations do not remedy faulty matrix response.

Over a considerable period of time the following causes for non-response of matrix have been noted. Most of the causes listed below are not common, in fact they are infrequent, but all of them have come under my observation in caring for Linotypes. A surprisingly large number of these causes for non-response of matrix can also account for doubling matrices.

Here is the list:

The Keylevers:

Sticky, rusty or bent key lever.
Metal shaving in keyboard plate and lever slot.

The Keybars:

Weighted keybar binds because it is bent, or one of the guides is shifted as to position.
Loose keybar banking bar.
Keyboard locked or partly locked.

Rubber Rollers:

Oversize, undersize, soft, hard or worn cam rubber roll.
Rubber roll has slipped back from end of shaft.
Rubber roll worn inside surface (not apparent from outside inspection).

The Cams:

Hinge rod has slipped endwise, disengaging cam yoke trigger.
Dirty (or gummy) condition of cam yoke at free end.
Hinge rod has worked out from bearing end of cam yoke (early models).
Hinge rod kinked at cam yoke (early models).
Yoke journal binding against adjacent yoke.
Cam binds on journal pin (dirt, rust or lack of clock oil).
Yoke tight against side of cam bearing.
Yoke journal pin broken at rivet end.
Yoke journal pin hole worn.
End of yoke worn at end which engages keyboard rod.
Yoke worn under keyboard cam yoke spring plunger.
Sticking keyboard cam yoke spring plunger.
No clearance (0.005 in.) between spring plunger and cam yoke.
Weak spring on cam yoke spring plunger.
Cam binding on stop strip or side of strip tooth.

The Keyrods:

Keyboard rod bent, twisted, rusty or dirty.
Bent or worn upper or lower keyboard rod guide.
Copy board resting against keyboard rods.
Weak keyboard rod spring (early models).
Worn keyboard rod at escapement verge.
Worn verge at keyboard rod.

Matrices:

Dirty, bent or burred matrices.
Wide matrix lug or lugs.
Linotype metal adheres to matrix lug.
Lug broken off matrix.
Wrong matrix in channel.
Flat matrix.
Matrices doubled up in channel, *i. e.*, two comma matrices in em-quad channel.

The Magazine:

Magazine not seated (Models 8 and 14.)
Dirty magazine.
Burr in magazine channel.
Escapement cover channel out of line with magazine channel.
Escapement cover sprung up or down.
No matrices in channel.
Magazine channel plate sprung downwardly, holding matrices in channel.
Magazine locked.

Escapement Verges:

Worn verge hinge rod bearing.
Binding verge.
Pawls binding in bearings.
Pawls binding in escapement (dirt, rust, burr or linotype metal).
Worn, bent or binding escapement lever.
Worn, bent, dirty or rusty verge plunger.
Weak, or binding verge spring.
Spring off verge.

Assembler Entrance:

Matrix strikes assembler guide or plate.

General Causes:

Distributor stop.
Wrong font, turned matrix or any cause keeping them from leaving distributor box.
Magazine high or low at front. (On early models due to misadjustment of the magazine supporting screws and on some of the later models due to loose keyboard bracket screws. Also failure of operator to seat magazine properly on Models 8 and 14.)

*Machinist in Charge, The *Journal-Post*, Kansas City, Mo.

New Heads of Printing Division and Technical Conference Plans

Edward Pierce Hulse, Printing Engineer, New York, N. Y., who has been named secretary, of the Printing Industries Division of the A. S. M. E.

New officers for 1932 have been chosen at a meeting of the Executive Committee of the Printing Industries' Division of The American Society of Mechanical Engineers. George C. Van Vechten, superintendent of the Stecher Lithograph Company, Rochester, N. Y., was named chairman, succeeding Arthur C. Jewett, director of the College of Industries, Carnegie Institute of Technology, Pittsburgh, Pa. Edward Pierce Hulse, printing engineer, New York, N. Y., was named secretary, succeeding Walter E. Wines, manager of the Mechanical Department, American Newspaper Publishers' Association, New York, N. Y. Floyd E. Wilder, Mechanical Research, Hearst Publications, New York, N. Y., was elected to the five-year term on the Executive Committee, succeeding Frederick M. Feiker, Department of Commerce, Washington, D. C. The three other members of the Executive Committee are Arthur C. Jewett, Pittsburgh, Pa.; William Clement Glass, U. P. M.-Kidder Press Company, New York, N. Y.; and John Clyde Oswald, managing director, New York Employing Printers' Association.

The associated advisory members of the committee are George H. Carter, the Public Printer of the United States, Washington, D. C.; Edward Epstean, president of the Photo-Engravers' Board of Trade of New York; Frederick M. Feiker, director of the Bureau of Foreign and Domestic Commerce, Washington D. C.; Ronald G. MacDonald, secretary of the Technical Association of the Paper and Pulp Industry, New York, N. Y.; Joseph M. Farrell, Mechanical Committee, American Association of Advertising Agencies, New York, N. Y.; Fred S. English, chief engineer of the Babcock Printing Press Manufacturing Company, New London, Conn.; Burt D. Stevens, first vice president of the Miehle Printing Press and Manufacturing Company, Chicago, Ill. The foregoing are all members of the A. S. M. E.

The Divisional Committees, with their chairmen, are as follows: Meetings and Programs, Floyd E. Wilder (succeeding Otto W. Fuhrmann); Research and Survey, Arthur C. Jewett; Progress Report, Winfield S. Huson; Paper and Pulp, William D. Maull. The Pan-Graphic Committee was discontinued, its work being absorbed by the Meetings and Programs Committee.

The plans for the Third Conference of the Technical Experts in the Printing Industry are practically completed, and the committee will soon announce the complete list of speakers and features. This will be held in New York City on Monday and Tuesday, March 14 and 15, 1932, the McGraw-Hill Publishing Company being the host in the new forty-story building at 42nd Street and Ninth Avenue. The banquet will be on Monday night at the Hotel Astor.

The New York Club of Printing House Craftsmen has changed its regular meeting date from March 17 to March 15, which will be the last day of the Technical Conference. The Craftsmen are planning on taking an active part in the conference and will extend an invitation to all those attending to join in their dinner on Tuesday night, at which time they have invited one of the prominent A. S. M. E. members as a speaker. They will also have a Reception Committee on hand at all times to look after the out-of-towners.

Dry Mat Manipulation

By Dry Mat Bill

We have discussed dry mats, their construction, characteristics and care; the preparation of the type form for moulding, and now we will take up and discuss the most important part in the making of stereotypes which is the use of a proper moulding cushion.

As yet no one, apparently, has discovered a blanket which will answer the full requirements of a moulding cushion. The nearest approach is a cork blanket but we find that when cork is hard enough to get the type full and flat it is too hard to prevent distortion of the mould.

Some stereotypers feel that by heating the cork they can prevent this distortion or stretching. To a certain degree, this is true but they seem to forget that in softening the cork they drive the spaces too deeply, which of course tends to distort the face of the type.

Heating the cork blanket also causes its rapid deterioration.

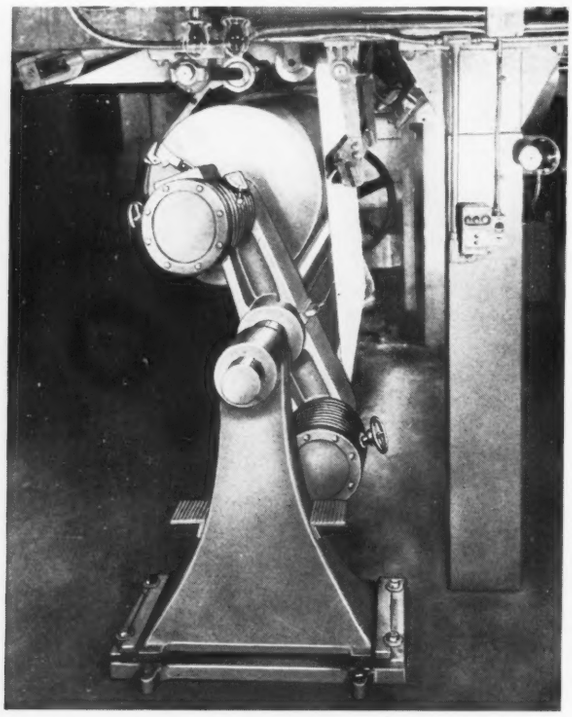
As the cork alone is not sufficient for best all-around results it is therefore necessary to seek out a combination that will work satisfactorily. The effort to secure an ideal combination has resulted in the utilization of more than one hundred combinations of material in the stereotyping trade today, all of them serving more or less satisfactorily.

The principal requirement of a moulding cushion combination is that it should be firm enough to get a sharp impression of the type matter and screened illus-

Continued on page 27

Hoe Automatic Full-Speed Paster

PERFECTION of the principle of automatic roll changing and its adaptation to the newspaper printing press, removes one of the costly obstacles (in time) in the mechanical production of newspapers. The operating speed of all presses heretofore has been greatly curtailed by the manual changing of newsprint rolls.



Hoe Automatic Full-Speed Paster which automatically changes paper rolls in a printing press while operating at full speed.

An automatic full-speed paster which changes paper rolls automatically in a printing press while running at full speed, has been announced by R. Hoe & Co., Inc.

The operation is as follows:

A multiple-arm paper-roll reel is employed in which the paper rolls are secured by means of quick-acting cone clutches of special design which insure quick gripping and releasing actions. Anti-friction bearings are provided in these clutches.

When the presses are running, the paper normally feeds from the roll in the upper reel arm and during this time the lower or reserve roll is prepared for pasting by a unique but very simple method. Two helically-disposed paper tapes, gummed on one side, are secured to the periphery of each roll and arranged in the general configuration of an inverted letter "V." The tapes have their outer ends secured by instantaneous clamps to radial arms which are operably-supported on the paper roll clutches. By this arrangement, the outer or free end of the paper roll web is immovably secured to the paper roll. In fact, owing to the peculiar disposition of these tapes, which are arranged to present a double helix, the entire longitudinal edge of the outer end of the paper roll is held with almost incredible security to the paper roll periphery. The prepared roll may be driven up to excessively high speeds without disturbing the relationship of the outer edge of the paper to the paper roll proper. The experimentation of Hoe engineers on this particular angle of pasting covered many months.

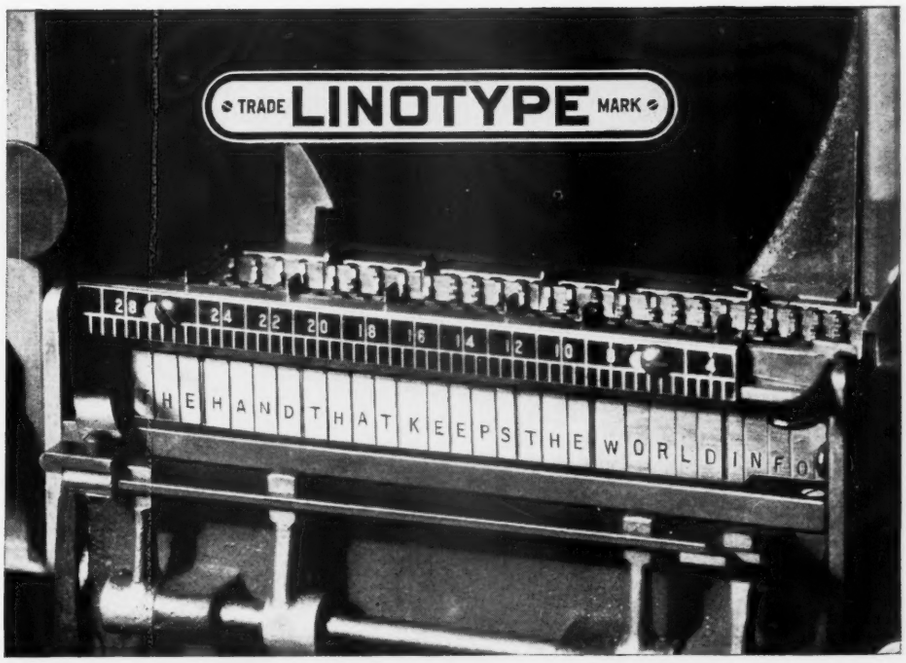
Ordinary resin glue, is applied to the outer surface of the paper tape. This tape now serves as a straight edge, and the short remaining free end of the paper roll web is readily torn along this edge. If any particles of glue have been inadvertently smeared on this free end, it is torn off with it, thereby leaving an accurate glue strip along the outer edge of the secured paper roll terminal.

After the running roll has run down to a predeterminded diameter, a roll-measuring mechanism electrically and automatically operates a visual and audible signal to indicate to the operator that the automatic paster is about to function. The device automatically rotates to bring the reserve roll of paper into running position, and at the same time the expiring roll is rotated down into its pasting position. While approaching the running position, the new roll is engaged automatically by synchronously-operated belts to bring the roll of paper up to synchronous speed with the running web. These belts are driven from the press through the intermediation of an ingenious differential device so arranged that equal operating stress is imparted to each belt and perfect synchronization assured irrespective of roll size.

In the meantime the expiring roll is diminishing and when it reaches a predetermined diameter of core, an automatic operation pushes the running web into contact with the revolving reserve roll by means of a brush extending the entire width of the roll. The previously prepared outer end of the reserve roll adheres to the running web and at the same instant the ends of the paper-securing tapes are automatically cut by a unique knife arrangement which insures absolute cooperative synchronism with other operating components of the device. When these tapes are severed, the free end of the new paper roll is completely surrendered to the running web without the necessity of breaking any adhesive hold, or tearing apart of any securing members. Thus it is seen, that this arrangement insures positiveness of operation because there is no "adhesive fight" or intervening disturbing operation when the free end of the new roll is being secured to the running web.

An ingenious web-cutting device is now automatically operated in positive time relation to the pasting operation. In this cutting device, a wire which is normally concealed darts from its housing and passes entirely through the web, thereby insuring a simple, but positive web cutting operation. The lightning-like speed of the cutting device and the method of preparing

Continued on page 29



SEE the Characters as You SET Them . . .

The new Assembling Elevator Duplex Rail Cap gives the operator a clear, unobstructed view of matrix reference characters during assembly. There's nothing in the way—a misspelled word or a transposition may be noticed and corrected in a moment before casting.

What makes this possible? A bevel cut on the cap—with a change in the depth and angle of the bevel. The surface has been Parkerized to eliminate light reflections, a further protection to clear vision.

This new cap may easily be applied to any outstanding Linotype. Order from the nearest agency: D-1361 for 30-em machines, Price, $1.25. D-2789 for 42-em machines, Price, $2.20.

Mergenthaler Linotype Company

BROOKLYN, NEW YORK · SAN FRANCISCO · CHICAGO · NEW ORLEANS · CANADIAN LINOTYPE, LIMITED, TORONTO, CANADA

Representatives in the Principal Cities of the World

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DOUGLAS B. HOUSER, VICE-PRESIDENT W. C. HOUSER, SECRETARY—TREASURER

St. Louis Globe-Democrat

GLOBE-DEMOCRAT PUBLISHING COMPANY.

The Newspaper of the 49th State

November 25, 1931.

Mr. A. W. Cochran, President,
The Stahi Newspaper Supply Company,
703 Bendix Building - 1206 Maple Avenue,
Los Angeles

Dear Mr. Cochran:-

Our Mechanical Superintendant, Mr. Frank DeWarf, has informed me that you would like pictures and a statement about the equipment which your company has installed in the new St. Louis Globe-Democrat building.

It occurred to me that you would be especially interested to hear a statement from the man who actually has charge of the department in which your machines are installed.

Here is what Mr. P. E. Silver, Foreman of the Stereotyping Department reports:

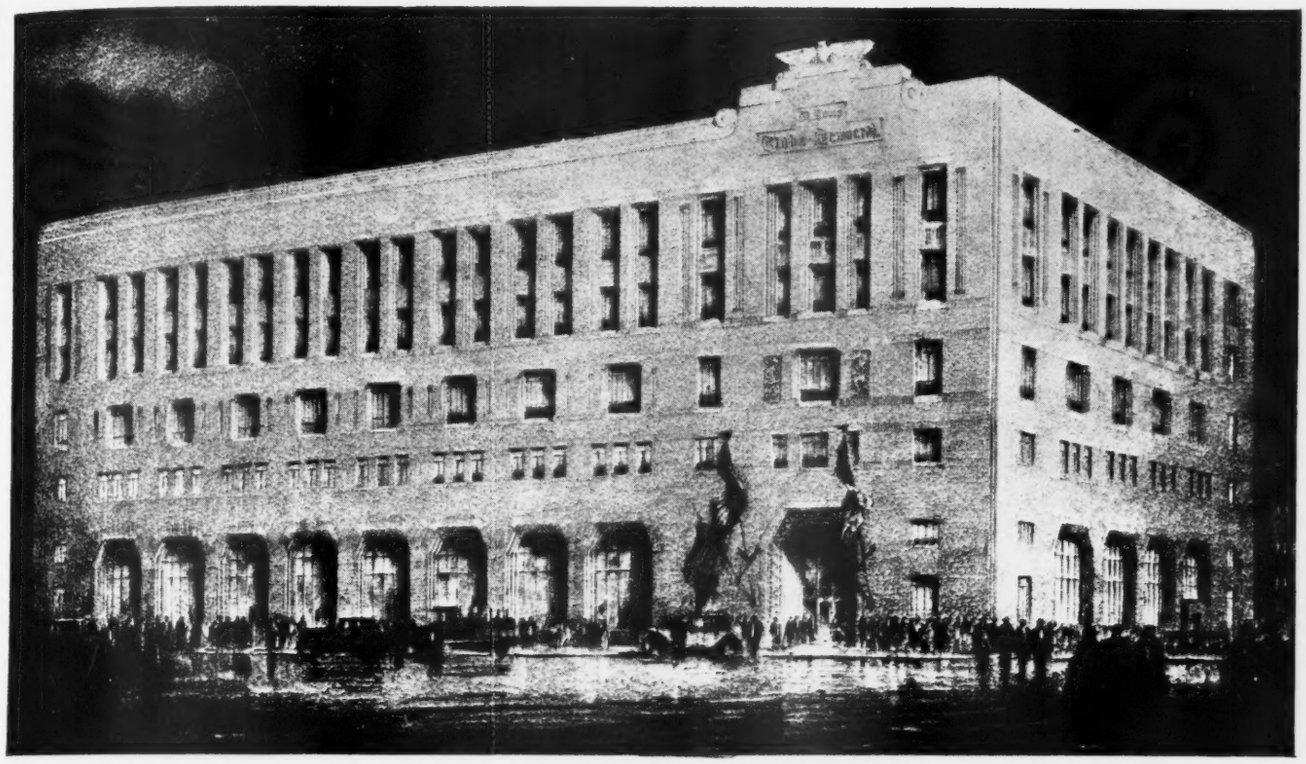
"With the time factor being all important in turning out newspapers, The Stahi Dual Heat Formers, such as are installed in The Globe-Democrat's Stereotype Department, enable us to keep pace with our planned production schedules. The 'formers' are safe, they maintain the desired uniform temperatures, and give satisfactory printing levels."

STA-HI

Sincerely yours,

W C Houser

W. C. Houser
Secretary and Treasurer
THE GLOBE-DEMOCRAT



NEW HOME OF THE ST. LOUIS GLOBE-DEMOCRAT—One of the Most Efficient Newspaper Plants in AMERICA Today.

Mr. P. E. Silver—Foreman Stereotyping Department, operating one of the two DUAL HEAT-PRECISION DRY MAT FORMERS, on The Globe-Democrat.

STA-HI DUAL HEAT DRY MAT FORMERS

are producing dry mats on a planned routine operating schedule in this great, efficient newspaper plant. They are "safe" in their preparation of dry mats for casting units, no Burning or Overscorching. The desired and uniform temperatures are maintained. Satisfactory Printing Levels are produced, meaning an even all over casting face on a dry mat; an even all over printing contour on plates. (Read Mr. Silver's confirmation on the opposite page.)

What the GLOBE-DEMOCRAT is enjoying in Modern and Efficient preparation of dry mats, any newspaper may also enjoy, by installing our DUAL HEAT-PRECISION DRY MAT FORMER. Investigate this wonderful machine. Write us for full particulars.

Sta-Hi Newspaper Supply Co., Inc. 417 Oregonian Building, Portland, Oregon. 1206 Maple Avenue, Los Angeles, California. 1235 Westlake Avenue, (Factory) Seattle, Washington.

Or write THE GOSS PRINTING PRESS COMPANY, Chicago, Ill., General Agents.

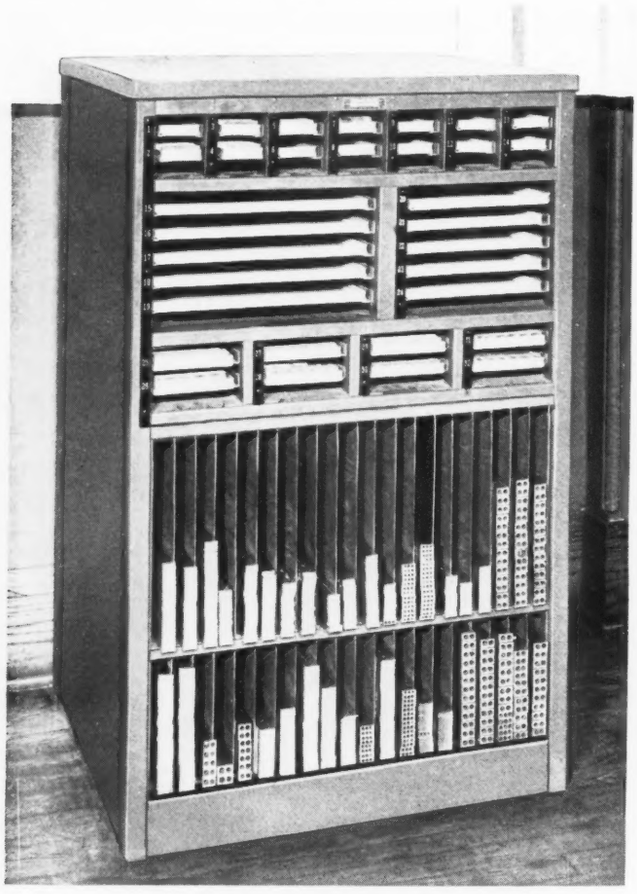
Latest Printing Equipment Mechanisms

New Ludlow Storage Cabinet

The Ludlow Typograph Company, 2032 Clybourn Avenue, Chicago, Ill., now offers Elrod users a new storage cabinet for the convenient storage and handling of strip material—leads, slugs, rules and base—produced on the Elrod. This Hamilton-Elrod Material Storage Cabinet, made in steel, is fitted for the storage of strips in the full Elrod range of thickness, from one point to thirty-six points.

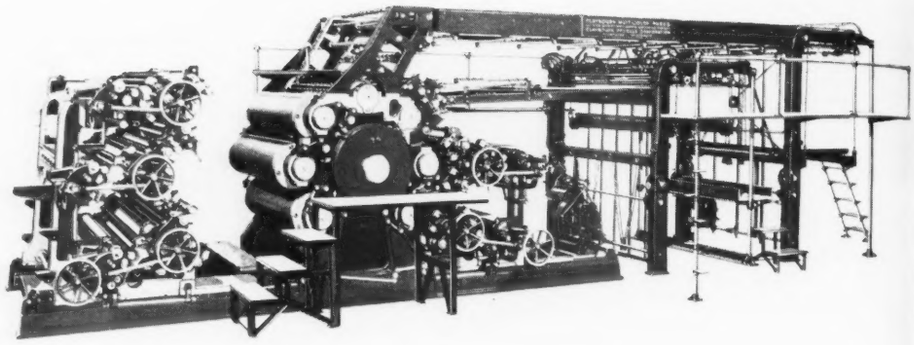
The cabinet is provided with rust-proof galleys to hold leads and slugs, one, two, three, four, five and six columns wide. There are fourteen galleys carrying one-column material, five for three or four-column strips, five for five and six-column leads and slugs, and eight for double-column material.

In the lower portion of the cabinet are forty compartments for storing quantities of material or base in strips 140 picas in length. The cabinet has capacity for a total of over a ton and a half of leads, slugs, rule and base.



Kleer-Print Blanket

The Sterling Rubber Products Co., 115 North Jefferson St., Dayton, Ohio, manufactures a rubber moulding blanket which is called the Sterling Kleer-Print Blanket. It is claimed that this blanket is the means of eliminating fractures and provides a deeper and clearer impression. It serves as a cushion, relieves pressure on type, lengthens the life of the cork blanket and makes a better printing surface on the plate. Particularly is this true of halftones. Further information may be obtained from the manufacturers.



Claybourn Five-Color All Size Rotary

The Claybourn five-color, all size rotary press with Harris Automatic Feeder and Harris delivery, is manufactured by The Claybourn Process Corporation, Milwaukee, Wis. Close register is guaranteed at 3000 sheets per hour. The sheet size is 46¼ in. by 71 in.

It is claimed that the accurately ground cylinders, rigid housings, large cylinder journals, sturdy construction and precision workmanship insure minimum makeready when Claybourn perfected plates are used.

A high pressure automatic oiling system lubricates all cylinder and drive bearings. Wherever practical, ball bearings are used to eliminate friction.

The feeder automatically operates the cylinder trip which also trips the ductor roll. The plate cylinders are equipped with Claybourn patented registering hooks. All bearers are of hardened steel. The inkers are provided with patented roller throw-off for all composition rollers. Fifty-five interchangeable composition rollers are furnished. The fountain ratchet has a graduated adjustment which can be made while the press is running. The inkers can be moved back and operated in rear position or not, as the operator chooses.

The press length is 40 ft. 2 in., width is 13 ft. 6 in., height 10 ft. 6 in., and the approximate weight is 60 tons.

Rouse Hand Mitering Machine

H. B. Rouse & Co., 2214-16 Ward Street, Chicago, Ill., have placed upon the market a new hand-mitering machine which, it is claimed, is equal to the exacting requirements of the largest and most critical shop. The machine is equipped with a positive point gauge which sets instantly to quarter points and locks automatically to points. This enables the operator to miter rules quickly and accurately to picas, nonpareils or points inside as well as outside measure.

The gauge teeth are self-centering and compensate for wear. The point adjustment is secured by turning a thumb

nut one notch for exactly one point. Intermediate graduations permit adjustment to quarter points.

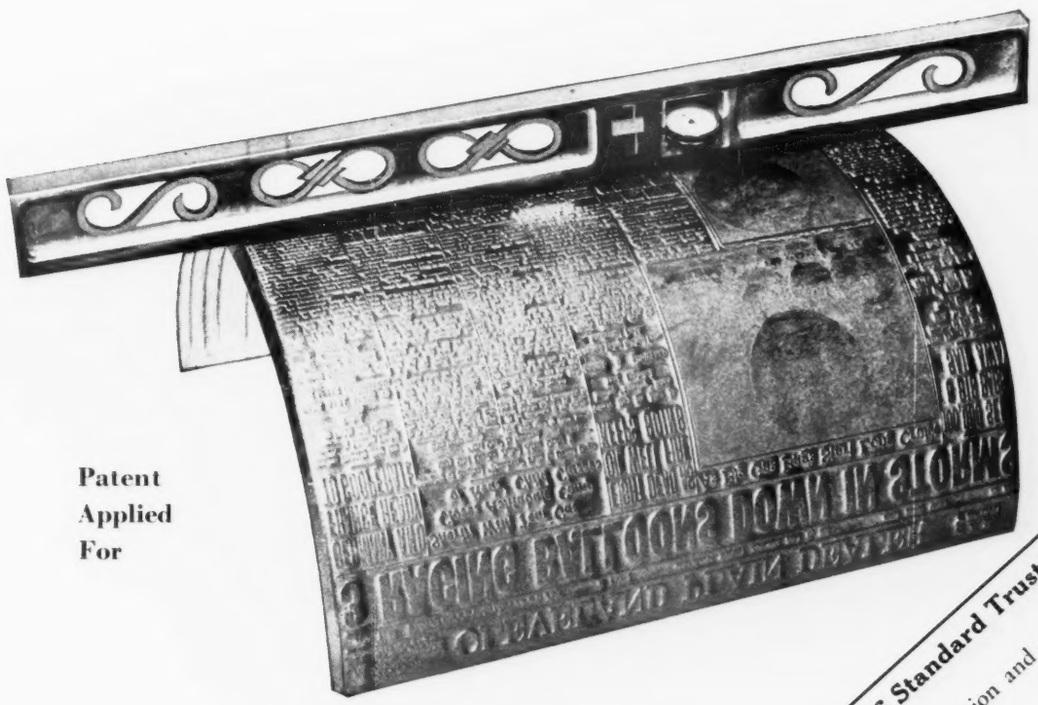
The table is indexed for all necessary angles and the capacity of the regular gauge is 83 picas (with the extension gauge, 144 picas) by quarter points.

The knife, which is made of tool steel, can be quickly and accurately adjusted. It's cutting edge is ground at the correct angle and is easily maintained by using the sharpening gauge which is supplied with the machine.

Continued on page 30

The **Bobe-Meter** is Used by Plants Which Demand the Utmost in Curved Printing Plates

SUPERINTENDENTS of stereotype foundries and pressrooms who demand near-perfection in their curved printing plates are purchasing Bobe-Meters. The Bobe-Meter shows them in thousandths of an inch any distortion, concavity, or high spots. This device has become a necessity in the interest of better printing. It has been the means in many plants of getting more uniform, cleaner reproductions. The cost of a Bobe-Meter is small indeed when compared to the saving in time and trouble in the pressroom. Send the coupon below for complete information and prices.

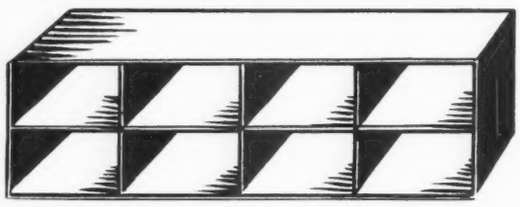


Patent Applied For

Bobe-Meter Manufacturing Co.
1846 Standard Trust Bank · Cleveland, Ohio

Bobe-Meter Manufacturing Co., 1846 Standard Trust Bank, Cleveland, Ohio.
Gentlemen:—Please send complete information and prices on the Bobe-Meter.

Name .....
Firm .....
Address .....
City .....
State .....



Cut Strips

OF

Gummed Packing Felts

Packed in

Pigeon Hole Containers

Cut 1/8″ to 1″ any Gauge or Width

Eliminates Waste *Saves Time*

Sold on Our Sheet Basis
No Cutting Charge

Plain Packing Felt
in
Rolls 12″ x 36″
Sheets 18″ x 28″
Cut Strips

Superior Cork Blankets

Superior Tail Boards

American Publishers' Supply Company

P. O. Box 131, West Lynn, Mass.

An Operator Writes of Machinists—and Operators

By MILO BENNETT*

Concluded from last month

YEARS ago when I started out as an operator it was seldom that one got a chance to work in an office with a really good linotype machinist. There was no such "animal." A little incident, I recall, occurred on the old Toledo *Bee*. I had returned from Chicago and decided to show up on the *Bee*. The machinist was a good mechanic. He could make an engine or do most anything in the way of machine work, but he didn't know any more about a typesetting machine than the chief engineer on a freight boat. The first day I showed up I caught on. The regular for whom I was working was a very poor operator. He struck the spaceband key with his thumb and made a lot of fuss operating a typesetting machine. The first "take" I got off the hook was a nice piece of typewritten copy. I started in and discovered that I had only eleven spacebands. I called the machinist and in a kindly, courteous manner (I had grown older and was not as fresh as formerly) asked him for more spacebands. He told me that the "regular" on this machine got along nicely with eleven spacebands and he couldn't understand why a sub would need more spacebands than a regular. George Magrane was the foreman of the *Bee* at the time. No machinist or any other person in the composing room ever put anything over on him. I knew this, so I went to the foreman and told him I would not operate a typesetting machine unless I had at least twenty spacebands. I got more spacebands, but I never will forget how mad the machinist became. He invited me out in the alley. He was a strong German and could have easily knocked me out in about one round. I didn't go out to the alley with him, but I gave him the worst tongue lashing he ever received. Before connecting with the Toledo *Bee*, the machinist had been an engineer in a brewery. He had never received big wages and had never associated with men like newspaper workers. He was just a big, overbearing, uncouth, rough Dutchman. In time we became great friends.

Another interesting experience I had was on the Toledo *Blade*. Dud Dale, the machinist, who has long since passed away, insisted on washing the mats in benzine at least every two weeks. He did the same thing to the magazines. After the mats were dry he sprinkled graphite all over them and ran them back into the machine. For two days the machines would work perfectly. However, as soon as the mats became gummy from circulating through a none-too-clean machine they would stick together. The operator would have only three days of pleasant operating out of every two weeks. I spoke to Mr. Dale about sprinkling graphite on the mats, and suggested to him that other machinists didn't do that and I believed he would have less trouble if he would stop using graphite. This made him very angry. While I worked with Dud Dale I had to put up with a lot of unnecessary trouble simply because he did not know how to care for line-casting machines.

Mr. Dale's assistant, Bill Watson, had been a machinist in a marine engineering concern before going to work for the Toledo *Blade*. Bill was a great fellow. He did not know what it was all about, but he had a pleasing personality and was a very fine man. Many times when Bill thought he had overcome some trouble on my machine and asked me how it was working, I would say, "She's working fine, Bill," Of course, nine times out of ten he hadn't remedied the trouble at all, but he was so darn pleasant and good that I just

*President, Milo Bennett's School, Toledo, Ohio.

A RESOLUTION

NO MORE «»

hazardous static!

avoidable paper breaks!

wasted time and material!

Sounds like an impossible dream, doesn't it? But it is a resolution you can live up to whether you are in the publishing or printing business or are engaged in the manufacture of paper, or if you are the manufacturer of fibre products or fabrics.

Vapo Systems, Inc., has solved the problem of applying just the right amount of moisture exactly where it is needed, through the perfection of high velocity jets which operate automatically on any kind of press or manufacturing machine.

Use of the Vapo Systems device in the press room makes possible elimination of costly web breaks caused by brittle paper, complete eradication of the static peril, important saving of time and materials and the elimination also of flying ink particles and paper dust. Quality of printing is greatly improved and higher speeds insured.

The broad benefits and economies derived from the use of Vapo Systems humidifying apparatus justify the comparatively small expense of installation. Under ordinary conditions the cost is returned in savings during the first year, and the equipment will last as long as the presses.

Join dozens of others and make that resolution today! Write to us at once and we will be glad to help you make 1932 your banner year for satisfactory results and freedom from press room troubles.

Vapo Systems
Incorporated

211 West Wacker Drive **CHICAGO, ILLINOIS**

Your Duty!

It is your duty to your employer to find and purchase equipment that will cut the cost of operation of your composing room.

The Automatic Ejector Set

Changes the Linotype Ejector AUTOMATICALLY

Make the machinist's and the operators' work easier, and at the same time increase production on your linotypes and cut the cost of repairs.

The Time Saving Device Company, Inc.

599 Kenmore Avenue

Warren, Ohio

SEND FOR COMPLETE DETAILS

couldn't hurt his feelings by telling him he didn't know much about it.

When I worked in Detroit, Jack Tracey, who is now with the Detroit *News*, was superintendent of the *Tribune*. The machinist in the office, who is yet following his trade, was a hard-boiled fellow. He is a good machinist today, but at the time I am writing about, the business was more or less of a mystery to him. He had a great habit of intimidating operators. If an operator's machine worked badly he would have to put up with it. If he complained too much about the condition of the machines, the machinist was liable to punch him in the jaw. I had worked on the *Tribune* for a number of months and felt that eventually the machinist and I would come together. This machinist had a great habit of hitting you when you least expected it. This particular night, I was putting on a driving belt. In those days machines were not driven by individual motors. Just as I leaned over to grasp the belt the machinist took a swing and caught me in the chest with his fist. I never was a fighter, and to this day I do not know how I did it, but I swung and hit him on the jaw, knocked him down and tried to jump on his face with my feet, but was stopped by the men in the office. From that time on, when I suggested to this machinist that I didn't have enough lower case "e" matrices he saw to it that I got them.

Do not take it that I am against machinists. I am not. I am simply relating a few experiences which occurred at a time when machinists were not as good as they are today.

I went to work for a newspaper in a town of 300,000 people. I could set lots of type. I was going along at an average gait, my proofs were coming back clean and everything was going lovely until I noticed the head machinist taking a look at the clock on my machine. I didn't mind having him look at it occasionally, but when I noticed he looked at it about every 30 minutes it "got my goat." I told him not to bother about my part of the work, that he was paid to keep the machines going, I was paid to set type, that I could do my work and he could do his. Further, I told him I did not want to see him looking at the linometer again.

During my travels I had met and made friends with many really remarkable linotype machinists. At the present moment. as I look back over my experiences, I think Bill Reid, of Chicago; Walter Severin, of Chicago; Joe Lowden, of "all over"; Johnny Ball, of the Western Newspaper Union, and Alfred Krueger, of the Cleveland *Press*, are some of the best machinists I have ever known. There is a young fellow working for the Scripps-Howard papers by the name of Jim Austin, who, I believe, is rapidly making a name for himself as a linotype machinist. He devotes a great deal of his time to the study of both linotypes and intertypes and shows remarkable ability.

While there are good and bad machinists, there are also good and bad operators. A poor, hard-working operator can cause a machinist more trouble than 20 good operators. The poor operator, in setting names, tries to operate so rapidly that he often touches a cap "M" key and a lower case "r" key at the same time, and blames the machinist because he has transpositions.

There are operators (many of them) who try to blame everything on the machinist. I have seen operators who insisted that the keyboard be speeded up. To please them the machinist would wrap tape around the keyboard pulley and the operator couldn't set any more type after the keyboard was speeded up than he did before. This was just a mental affliction. I believe many operators have mental afflictions. One time when I was working with Mr. Dale, a machinist, he had one operator he could not please. This operator thought he wasn't setting as much type as the other men because the knife-block was trimming the slug too much. The machinist

couldn't do anything with this fellow. One day when this operator was off, the machinist asked me if I would work on that machine, I set 56,000 ems of solid 6 pt. type. When the operator returned to work and found out what I had done he stopped complaining. Now, the trouble with this operator was this: He was incompetent; he knew he was incompetent and to save his own "skin" he was making life miserable for the machinist.

Put a certain type of operator on a Model 8 Linotype, in good condition, and in 30 days he will think it is the finest machine in the world. Put him on a three-magazine Intertype for 30 days and he will think the same thing. So it goes along the line. A man who has operated a Model 5 for years believes it is the finest machine ever made. This proves that the average operator, unless he is a man of great experience, is not in a position to tell a publisher or an experienced composing room executive which is the better model of machine. The fact of the matter is he doesn't know.

An experienced typesetting machine salesman can "get the number" of a machinist or an operator in a very short time by making one or two calls at the office in which he works. The real fast, easy-working operator, as a rule, never gives much advice. The competent machinist, the man who can keep his plant running under any and all conditions, is reticent. He doesn't give much advice. He is too busy keeping his plant operating one hundred per cent.

If I were a young man starting out as an operator I would not do as I did years ago. I would not become "chesty" because I could set a lot of type, nor would I be so severe with linotype machinists. It doesn't pay to quarrel. My experience on the road, however, taught me that good linotype machinists and good linotype operators are in the vast minority. They are scarce. Advice given by either a linotype machinist or a linotype operator who is not a top-notcher is, in most cases, advice not worthwhile.

Makes Plea for Finer Craftsmen

By GEO. B. GANNETT*

Concluded from last month

We cannot stop to educate apprentices thoroughly in our shops today, because we move too fast. An order comes in, ordered out yesterday, the wires are busy, need causes speed, and the result is we haven't time to give these young boys the knowledge they are justly entitled to according to the understanding they have when they go into our employ.

There may be some of us who in our hearts and souls are teachers, but, unfortunately, there are very, very few teachers. Many of us have the knowledge, but we cannot impart it to the other person.

I have seen this, and you have seen it, too: A boy who has been in your shop for a year or a year and a half, going out and getting lunches. What the hell can he learn about the printing business getting lunches? Yet the same man, after he has finished his four-year course, is supposed to be a craftsman, a journeyman, if you please. You know he isn't; I know he isn't.

Today is the day of intensive training; it is a day when a man must (to use a common phrase) "know his onions." It is the survival of the fittest. It is a time when, if a man knows anything and knows it well, he is the man who is going to be retained. The real craftsman does not walk the streets looking for a job; the four-year, shop-trained apprentice many times does.

It is a day of laboratory research, we must know whereof we speak. If a man sets himself up as an expert he must know

*President, Geo. D. Barnard Stationery Co., St. Louis, Mo. Abstract of address delivered before the convention of the International Association of Printing House Craftsmen, Aug. 17-19, St. Louis, Mo.

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Certified Dry Mats are certified in fact as well as by name.

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Each and every mat is unqualifiedly guaranteed to deliver the goods or you may have your money back without question or quibble.

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Inherent quality makes Certifieds the most economical mats for your stereotype department to use, as hundreds of your fellow publishers have found out in the past eight years.

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Forget price! Use quality at the right price! It pays!

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For dependable stereotyping— use Certified Dry Mats

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"This new **IMPERIAL VITAFLUX** *is great*"

TRADE MARK REG. U. S. PAT. OFF

"SAY, VITAFLUX, the new compound Imperial has just brought out—saves money. I have used a great many things in the past to reduce dross wastes, that worked pretty fair but VITAFLUX reduces my dross to a fine powder free of lumps and visible metallics, thus reducing replacement metal orders and freight expenses. Even if this were all it did, it would be worth its cost, but VITAFLUX revitalizes type metal because it contains certain ingredients that directly enhance the casting properties. My suggestion to you is to send for a box of a dozen tubes—one tube treats 2000 pounds. And besides, the tube is made of pure tin. Price, $2.75 a box, $2.50 a box for 12 or more. VITAFLUX is another reason why I . . .

stick to

Imperial METAL

THE IMPERIAL TYPE METAL CO.

Philadelphia · New York · Chicago · Los Angeles

the subject on which he claims to be an expert. The laundrymen, for example, are spending one million dollars a year. They are testing soaps as compared with water. They are testing various cleaning fluids with the new materials that are coming out today.

I have in mind a case which came to my notice a year or so ago in the cleaning industry. One of the cleaners came in to the lunch table one day. He had a bundle in his hand containing a wonderful garment. It looked like a piece of lovely white silk and it was gorgeous to look at. He said, "Here is another fifteen dollars charged to profit and loss." He had taken this garment and marked a ring where he had cleaned with carbon tetrachloride, and the material was gone; he used cleaners' naphtha and the material was gone; in another spot he had cleaned with ether, and the material was gone.

That garment was sent to the headquarters of the association and they tested it for every known fabric, even rayon, and when they got through their answers were all negative. They traced the thing down and found out that this garment had been bought some place on the other side. The lady, who owned the garment had sent it in to be cleaned and they found it could not be cleaned with any known methods. That experience saved the cleaners of this city hundreds of dollars. Why? Because when the cleaners see that material they know enough not to try to clean it by any of the "rule-of-thumb" methods.

I use this experience to illustrate the necessity for other industries having known quantities, trained minds and definite, scientific knowledge.

In the printing profession and in the various other graphic arts, various things have been done. We have the Lithographic Foundation in Indianapolis. We have various other organizations which are endeavoring to bring our profession down to a scientific basis, but in training the machines are we training the men? Not a whole lot! We are using, in many instances, the old "rule-of-thumb" method.

Vocational training in the printing industry is in its infancy. It is one of the most powerful things and the greatest forward step our industry has ever taken, for the reason that it is introducing into our ranks men, and oftentimes women, who have a definite knowledge of what they are doing. They are not trusting in or working by the old "rule-of-thumb" method. They know exactly what is going on and if you ask them they can tell you *why* it is going on. They have a knowledge of arithmetic as applied to printing; they have a knowledge of grammar; they have a knowledge of syntax and they have a knowledge of literature, as applied to printing. That is the type we must develop if this industry is to go along and make the strides it should. If this industry is going to continue being the repository of all the knowledge, all the information and all the education of this country, we must train our people.

One branch of our business is lithography. Up to a few years ago lithography was a mystery. We had men with us for ten, twenty, thirty an forty years. I am not criticizing, I am stating what happens. If you asked one of them how a result was accomplished the answer would be, "I take a little of this, that and the other and get the result." Cut-and-fit method! They tried it out. If it didn't work they tried something else.

In our organization we came to the conclusion that none of our managers knew much about the lithographic business. After thoroughly analyzing the situation we took two or three of our most promising young men and educated them from a scientific standpont. We gave them all that science knows of lithography up to the present time. When new sciences are introduced we have men who know why they do this or that. The result is that we have been able, through that system to produce better lithography at a less price and that is what the public is crying for today.

It seems to me there are three things to instill into the minds of these younger men who are coming up, who are going to take your place and my place. You are not here forever—you may have your "three score and ten" and then you are through. You must develop somebody to come up and take your place. You may reach ninety or one hundred but when your time comes someone must be there to step into your shoess. One of the biggest jobs for an executive, no matter where he is located, is to develop somebody who can take his job when he passes on.

Last of all is that wonderful thing which nobody can put into a man or give to him—it is the joy of creation. If a man has that joy of creation, that desire to excel, that wish, that urge to become a Craftsman and produce a masterpiece—no matter whether he is printing, making watches or digging a ditch, he is going to be a success.

Dry Mat Manipulation

Continued from page 15

trations, yet resilient enough to get satisfactory depth to the spaces and when one considers the variety of cork blankets, woven and pressed wool blankets, fibre and paper boards, zinc and copper sheets, pure gum and composition rubber blankets, etc., being used in apparently successful combinations, it would hardly be good policy to favor any particular hook-up. They all have their good points in meeting certain specific conditions. The individual combinations, of course, are affected by the dimension of the roller, whether light or heavy-duty moulding machine is used and the distance between the type form and roller.

When the proper hook-up or combination is used the mould will lie reasonably close to the form. The stretch of the mould will not exceed ⅜ in. and it is recommended that the operator test his average stretch and try to keep it within ¼ in.

The use of the combination cushion composed of cork and felt is perhaps the most generally used. This combination ordinarily gives a normal stretch of approximately a ¼ in., according to the uniformity of the form makeup.

This cushion, however, in connection with the use of a small diameter roller permits the impression to be taken over a very small area across the form, causing the roller (with its average pressure of 1500 lbs. per sq. in.) to force the mat downwardly to such an extent that it will be cut by the rules. The roller will also bump up against the unprotected borders when operated under these conditions. This, you may readily see, aggravates distortion, as the heavy pressure with such a narrow area of impression has a tendency to pull the mat to such a degree that the larger type, especially, is pulled out of shape.

It is advisable to use a moulding board under these circumstances, for the moulding board increases the area of the roller contact, permitting the pressure to gradually enter in and relieve itself from the type spaces as the form passes under the roller. This prevents a great deal of the distortion.

Again, a moulding board used without good slippage is worse than none at all. Proper slippage or creeping

seasons greetings

AT this season our thoughts naturally revert gratefully to those whose courtesy, good will and loyalty have made possible our success. + + +

IN grateful appreciation we extend our heartiest wishes for a Happy and Prosperous New Year. + + +

BURGESS CELLULOSE COMPANY
FREEPORT + ILLINOIS

An Old Wood Idea For a New Year

IT'S an old idea with the Wood organization to have as salesmen, men who qualified as buyers of dry mats before they began selling them.

Such salesmen are Service Men who understand both approaches to mat-making problems.

This old idea is something for you to have in mind as you begin the new year—1932. Whether you use Wood Dry Mats or some others, when you run across something that proves puzzling, resolve to put your troubles up to Wood for the attention of the Service Man and the Research Department. You will not be disappointed.

WOOD

FLONG CORPORATION
HOOSICK FALLS, N.Y.

may be secured with the use of a felt creeper laid on top of the combination.

Because of the much-asked question, "Is rubber advisable or recommended?" I will include a discussion on this blanket at this time.

Rubber, when properly used, has more virtues than vices and may be used readily with excellent results. Some of its merits are: (1) It considerably reduces the pressure required to get proper impression; (2) it squares off the face of the type and illustration, aiding in getting cleaner and sharper printing; (3) it leaves a nice, smooth back to the mould which plays a good part in obtaining good black solids, sharp middle tones and shadows; (4) it has a rapid comeback, making it practical to use but one cushion on all forms throughout the day; (5) it preserves the cork, or rather, the resiliency of the cork is not so important and it may be used long after it would be discarded ordinarily if it was used next to the mat itself; (6) and last, but most important of all from a manipulation standpoint, it reduces the stretching of the mat. Stretching or distortion of the mat is one of the chief reasons for lost printing surface.

One of the chief objections to a rubber creeper is that it calls for an extra gesture in the moulding operation in that its use requires care as to position.

The use of the wrong type or thickness of creeper is more frequent than not for there are many kinds on the market today and very few give real satisfaction. Therefore one should not condemn the use of a rubber creeper until all types and compositions have been tried on all the different constructions and thicknesses of mats.

A rubber creeper should be made from a strong compound with a fair amount of resiliency. The thickness of the creeper should not be greater than the distance between the face and shoulder of the type. This runs about 0.030 in., so a creeper should not run over 0.028 in. for best results. A thinner rubber is preferable.

A rubber is of no advantage with the soft-textured mats as it produces deep space without depth in the bowls of the type. It is best to stick to the hard cork and 1/4 in. pressed felt for this type of mat.

A good cushion for the more firm textured mats is a thin firm rubber creeper, hard cork and a 1/12 in. woven or 1/8 in. pressed wool felt creeper. With this combination, the standard distance from roller to type form should be very close, if not exactly, eight points.

It may be added that this cushion combination is rapidly becoming popular in the plants of various newspapers and is very beneficial to those equipped with 10 in. or 12 in. rollers and light duty machines.

I was talking one day with a mat manufacturer's representative and he spoke of a cushion which gave very good results in the plant where it was being used. As it apparently met certain conditions too often found in various publishing plants, I will present it to you for what it may be worth.

It seems that in this plant the standing forms are

made up with extra low furniture, naturally causing very deep spaces. Ordinarily in cases of this kind it is necessary to take time to cut lino-slugs to fill in, but with this cushion this operation was found to be unnecessary, as it holds back the depth yet secures an extra sharp face to the type and clean depth to the bowl of the characters and screens. There is very little stretching of the mat and the mould lays to the form like a wet mat.

Sounds too good to be true, doesn't it? Well, I won't keep you waiting longer. Here is the combination: First the mat is placed on the form, next is a *pure gum* rubber creeper calipering about 0.025 in., next is an old piece of monocork press blanket discarded from the press, and next a hard cork. That's all. Simple isn't it? Then why not give it a good try out?

The fact that the composing room force is supposed to prepare the form properly for moulding does not relieve the stereotyper of seeing that it is properly made up so that a good mould may be secured from it; that John Smith uses a cork and felt for his moulding and gets by with it; that the machine erectors set the moulding machine at a given distance, etc., does not relieve the stereotyper of his responsibilities and anyone having this erroneous idea or conception of the process of stereotyping may rest assured that his attitude will be reflected invariably in a poorly-printed paper.

Hoe Full-Speed Paster

Continued from page 16

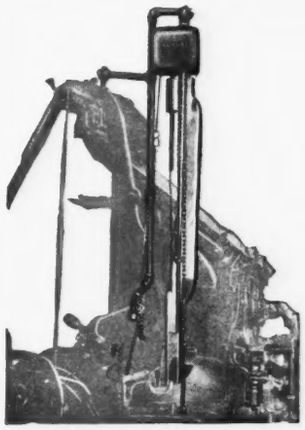
the roll, reduces the paper waste by about one-half.

Each arm of the reel is provided with an entirely mechanical automatically-compensated dynamic tension device which visually indicates the tension exerted. Any degree of tension may be obtained and the proper amount of web tension is maintained thereafter irrespective of the paper roll size. Inasmuch as each reel arm is provided with its own tension device, the degree of tension exerted on the web is not in any way affected by the movement of the reel. Furthermore, the provision of a tension device for each paper roll insures the stopping of the stub-roll immediately after the full-speed paster and the web-cutting operations have been performed.

Furthermore, the dynamic tension devices co-operate with the running belts so that when a red button, emergency or service stop occurs, the driven belts impart braking action to the periphery of the roll, thereby preventing run-ahead of the paper roll.

R. Hoe & Co. Inc., state that in the design and construction of this full-speed paster they have constantly kept in mind several requirements they believe to be of the utmost importance: (1) The necessity of keeping the mechanism as simple as possible; (2) making the device fully automatic and safe in every way; (3) the attainment of absolute synchronization between the expiring web and the new roll, and (4) the entire elimination of any restraint on the web at the instant it is put in contact with the expiring web.

THE MARGACH
Automatic Metal Feeders
for



Linotype
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No other article in the Printing Industry can answer its purpose more effectively than the Margach Feeder, which not only sells for the moderate price of $75.00, but its life of 100% efficiency is guaranteed for ten years—and will undoubtedly last indefinitely, 10,000 users can testify to this. Among our sales representatives are the Mergenthaler Linotype Co., Intertype Corporation, Lanston Monotype Co., and the Ludlow Typograph Co.

MARGACH MFG. CO., INC.
HERMAN DIAMOND, President
213 CENTRE STREET NEW YORK CITY

This Cleaner Purchased Now Will Pay for Itself by December

Why put up with dirty, slow, expensive hand spaceband cleaning? Have this cleaner installed in your plant in January —by next December or shortly thereafter it should pay for itself.

Rockaway Spaceband Cleaner

cleans, polishes and graphites thirty bands per minute, trues the sleeve of the band to give a perfect lockup of matrices, and lengthens spaceband and matrix life. Write today for full details.

THE ROCKAWAY COMPANY
5409 Vliet Street Milwaukee, Wis.

An Opportunity For *an* Experienced Machinist

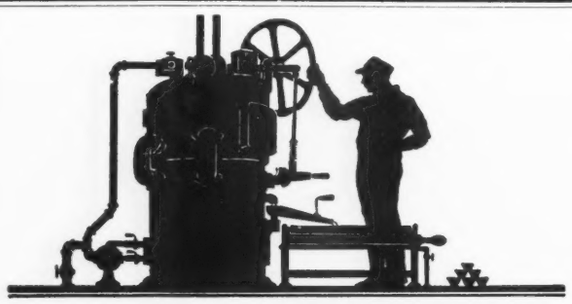
A manufacturer near New York who has recently developed the best saw blade on the market for cutting type metal is now in need of the services of a thoroughly experienced machinist to take charge of the shop.

The man needed for this place must be a practical mechanic, competent to handle machine tools and take full charge of production of saw-making and able to develop linotype repair work to a profitable branch of the business.

The present owner wishes to spend more time on the road developing the saw business and cannot handle both ends at once.

There will be an investment of $6000 required, covered by an interest in the business, but the first and most important requirement must be ability to do things. Linotype machinist preferred.

Answer H. W. HOYER
115 Harrison Avenue Harrison, N. J.



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DROSSLESS & FUMELESS.
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The Monarch Engineering & Mfg. Co.
701 - 702 American Bldg., Baltimore, Md., U. S. A.
Works, Curtis Bay, Md.

Latest Printing Equipment Mechanisms

Continued from page 20

The Imperial Type Metal Co., 1800 So. 54th Ave., Chicago, Ill., manufacturers of type metals, now offer to printing and newspaper plants a newly-developed compound called "Vitaflux," for reducing dross waste, and for revitalizing type metals.

Imperial has used many compounds in its manufacturing operations to control drossing and to purify type metal alloys and claim that Vitaflux is vastly superior to all compounds or fluxes previously tried.

The makers also claim Vitaflux will prove to be a money-saver to the metal buyer in that it will definitely reduce dross to a fine powder free of all lumps and visible metallics. Likewise, smaller dross shipments mean freight savings. Vitaflux contains certain ingredients which directly enhance the casting properties of type metal and this advantage alone, it is claimed, would justify its use in every plant—large or small.

Imperial's Vitaflux is packed a dozen tubes to a carton. There is enough Vitaflux in one tube to treat 2,000 lbs. of metal. The tube is made of pure tin which upon melting is incorporated with the metal.

Announce Super-Speed Press

The Heidelberg Printing Machinery Corporation, 270 Lafayette St., New York, N. Y., has just brought out a new press called the "Super-Speed." As the name indicates this new automatic has a speed of 4,600 impressions an hour. When printing two up, 7,000 to 8,000 per hour is claimed by the manufacturers.

The Super-Speed weighs 2,200 pounds and occupies 3½ ft. by 5½ ft. floor space. The ink distribution is of the universal type with two 2 in. form rollers and patented ball-bearing vibrator. The form rollers completely clear the form. The roller tracks can be quickly adjusted through the medium of set screws when necessary to compensate for the expansion and contraction of rollers due to atmospheric changes.

This press has one large and one small inking cylinder with reciprocating movement, and distributing roller with steel rider, ductor roller, fountain roller and full size ten-key fountain. Two set screws in the fountain hold the removable ink blade which facilitates the cleaning of the fountain.

The impression lever makes it possible to increase the impression one tissue by a turn to the right and decrease it by a tissue with one turn to the left while the press is running.

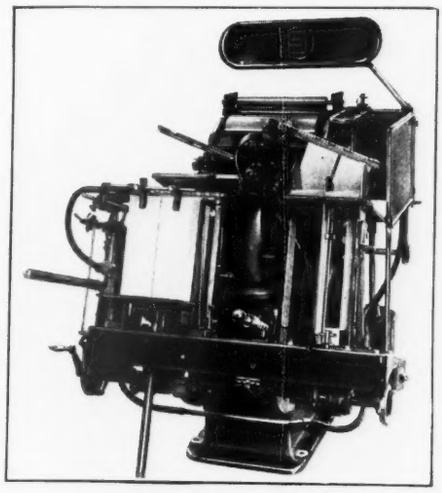
The Super-Speed has automatic guides, the movement of which originates from cams which always insure positive and accurate action. These features are designed for complete accuracy in color process work and all register jobs.

The feed and delivery tables of this new press each hold 3,600 sheets of 20-lb. bond and will handle any range of stock from onion skin to 8-ply card.

Another unusual feature in connection with the feed table is that the necessary adjustments for the blow-air and the suction-air are easily adjusted through the medium of dial indicators. This same arrangement applies to the feed table, that is, the control of the feed table for handling various

weights of stock is adjusted by a lever with a dial indicator as a guide for light, medium and heavy weight stocks.

In addition to doing 7,000 to 8,000 impressions per hour on small jobs, the makers say this also applies to envelopes, as long as the weight of the stock is about the same.

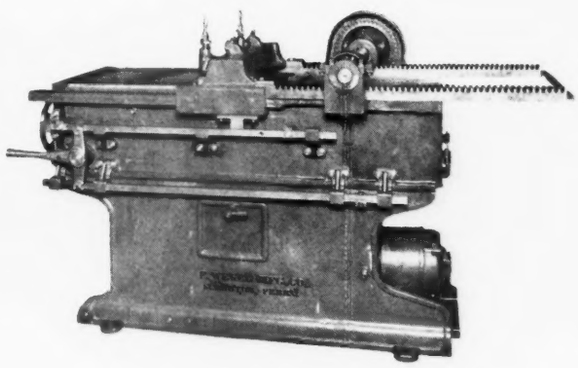


With a simple attachment, which can be attached or removed in ten minutes, the Super-Speed can be used for check imprinting. A chute is used for turning the sheet over so that forward numbering heads can be used. One experienced operator can number and imprint 50 books of 500 checks, a day, according to Heidelberg officials.

Wesel Raising Bed Shaving Machine

The F. Wesel Mfg. Co., of Scranton, Pa., has announced a new shaver which is of "raising bed" construction—the knife head traveling in a constant plane on a substantial pedestal, the rails of which are an integral part.

A convenient hand wheel, directly in front of the operator, adjusts the plate in relation to the knife head. The exact movement of the bed is shown by graduations on the wheel circumference at all times. Mounted on the graduated hand



wheel is a slip indicating ring, by the use of which the table can be brought back to exactly the same position as the previous setting.

The knife head can be instantly stopped at any point of either the forward or return stroke. The return stroke of the knife is double the speed of the cutting stroke. The new "raising bed" model is easily and smoothly controlled by the hand lever provided directly in front of the operator.

A pressure roller is furnished as a standard part of the unit. This roller is supported by bearings formed upon the ends of short vertical rods, which extend upwardly through brackets bolted to the knife head. Powerful coiled springs within the bracket force the roller downward upon the plate. This is in

THE STERLING

"Kleer-Print"

Stereotypers' Rubber Blanket for Dry Mat Molding. It will pay you to use the

Sterling "Kleer-Print" Blanket

Used successfully by the Leading Newspapers throughout the country.

Price, $1.50 Each

Write for discounts on quantity purchases and our special trial order proposition.

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115 N. Jefferson Street **Dayton, Ohio**

ALL SPACEBANDS ARE NOT ALIKE!

A casual inspection may reveal no differences—but as a matter of fact there may be many—readily apparent to the expert eye.

No purchase of bands should be dependent on price. The resultant loss, direct or indirect may be great.

Star Spacebands have been favorably regarded for years because of the meticulous attention given to their manufacture. Each one "mikes up" like the other at all points—the backs of the sleeves are ground to prevent possibility of hairlines—the face of the sleeve is polished *twice* to reduce the tendency to "take metal"—sleeves and wedges are 90% interchangeable, a tribute to the accuracy of their fashioning. In addition they are equipped with the patented steel eccentric stop pin that is so advantageous in changing sleeves.

STANDARDIZE ON "STARS" FOR LOWER COSTS

New Low Prices—Medium thick $1.00 each; extra thick $1.15; thin $1.10; extra thin $1.10; special $1.25.

Each 10c less in lots of 100. On special type, 20c less.

Linotype Parts Corporation

270 Lafayette St. **New York City**

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NEW—USED—REBUILT
LINOTYPE-INTERTYPE
Parts, Accessories, Repairs
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Tell us about your surplus typesetting machine equipment, and get our price on what you need. Have hundreds of fonts always on hand, $5 up. Our new magazines, $125: split magazines, $90; molds, $60; spacebands, 90c; liners, $1.25. Many other bargains averaging savings of one-third to one-half on guaranteed material.

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  Knife Wiper Trouble ... 30, June
  Letter from Texas ... 16, Feb.
  Linotypes and Humidifiers ... 18, April
  Matrices "Squabble" on Waiting Line ... 30, June
  Matrix Lugs Sheared ... 16, Feb.
  Melting of Printers' Rollers ... 18, Dec.
  Model 26 Distributor Stops ... 18, April
  Model 26 Distributor Trouble, Al Krueger ... 20, May
  Mold Disk Brake ... 28, Aug.
  Mold-Turning Segment Screws ... 11, Sept.
  Mouthpiece Vent Slots ... 30, June
  Overthrow Plunger Too Long ... 28, Aug.
  Plate Troubles ... 18, April
  Poor Face on Monolith Border ... 18, April
  Poor Type From Monotype, Harvey F. Ellis ... 16, Feb.
  Rules Slur at Head of Page, Wm. J. Schneider ... 20, May
  Spring Plunger Linotype Vise Cap ... 16, Nov., 1930
  Strip Material Trouble, John Van Dellen ... 16, Feb.
  Thought on Humidity, W. E. Wines ... 20, May
  Type Face on Slugs Uneven ... 16, Nov., 1930
  Vise Automatic Trouble, Norman Bellville ... 20, April
  Water Temperature and the Autoshaver ... 15, Oct.

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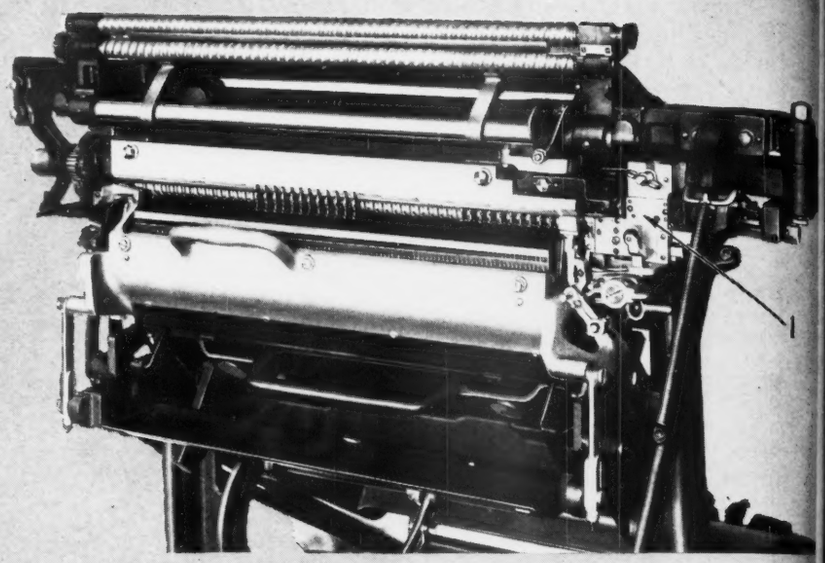
FIGURE D—THE DISTRIBUTOR SHOWING THE SINGLE DISTRIBUTOR BOX (1) WITH MATRICES SUSPENDED FROM THE FRONT AND REAR DISTRIBUTOR BARS.



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THE NEW INTERTYPE MIXER:

"A marvelous producer because you have perfected real continuous distribution."

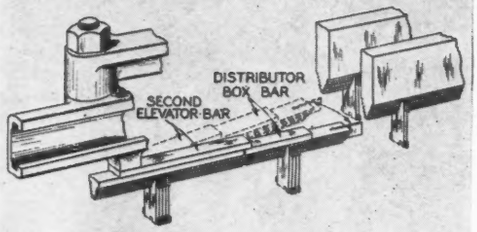

FIGURE E—DISTRIBUTOR BOX BAR SWINGS FROM ONE DISTRIBUTOR BAR TO THE OTHER. A SMALL NOTCH IN THE BOTTOM OF THE MATRICES CONTROLS THE MOVEMENT OF THE BOX.

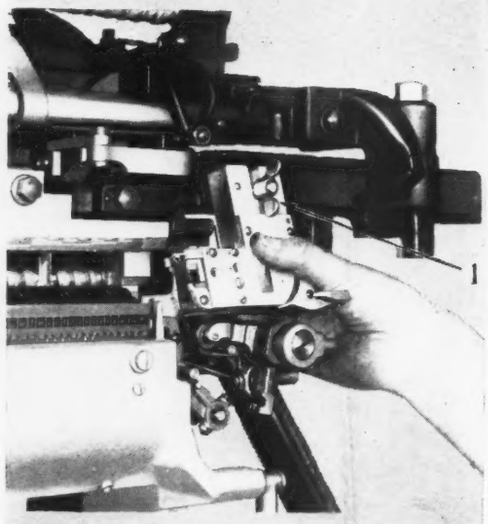

FIGURE F—DISTRIBUTOR BOX IS EASILY REMOVED.

Unless the speed and accuracy of distribution of the matrices on a mixer is as fast and as dependable as the keyboard, a mixer is not a practical composing machine.

On the NEW Intertype Mixer the drop of the matrices from the distributor to the upper magazine is exactly the same as on single-distributor Intertypes, and the drop from the distributor to the lower magazine is only slightly greater than on single-distributor Intertypes. These features make for dependable distribution, and on a mixer a really dependable distributor means increased production.

The view of the distributor in Figure D shows about all there is to this part of the NEW Intertype Mixer. The *single distributor box* (1) is shown in position for feeding matrices to the front distributor bar for the upper magazine. Another row of matrices can be seen on the back distributor bar, which coöperates with the lower magazine.

The diagram in Figure E indicates how the single distributor box moves back and forth from one distributor bar to the other.

Figure D and E will demonstrate to line composing machine users how mixer distribution of matrices has been made as simple and accurate as single-magazine distribution.

Aside from the automatic movement of the distributor box—when changing from one magazine to the other as matrices of one font or the other pass through it—the mechanism and operations of the NEW Intertype Mixer are in general the same as on any other Intertype—*and the Intertype has always been noted for reliable matrix distribution.*

Figure F shows the NEW Intertype Mixer distributor box. This box moves back and forth from one distributor bar to the other. The action is simple, positive, and dependable, because the distributor box position is controlled by a SINGLE notch on the bottom of the matrices being used.

By just turning a thumbscrew (1) Figure F, the distributor box can be taken off for inspection or for cleaning.

Write for your free copy of the NEW Intertype Mixer booklet.

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